PILOT STUDY ON EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME REGARDING KNOWLEDGE AND PRACTICES ON NEONATAL RESUSCITATION AMONG NURSING STUDENTS

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DOI: http://doi.org/10.47211/trr.2023.v09i01.014

ABSTRACT:

Neonatal resuscitation is a critical skill for nursing students. It involves techniques to support and revive newborns who may have difficulty breathing or have a weak heartbeat. Training programs ensure students learn the necessary knowledge and practical skills to provide effective care in these situations. It's important for nursing students to stay updated on current guidelines and best practices in neonatal resuscitation to ensure the safety and well-being of newborns. The main aim of this study is to evaluate the effectiveness of video assisted teaching program regarding knowledge and practices on neonatal resuscitation among nursing students. The study concluded that the frequency and percentage distribution of pre intervention levels of knowledge and practice scores among nursing students 67.0% had inadequate knowledge, 20% had moderately adequate knowledge and 13.0% had adequate knowledge.

Key words: *Pilot study, effectiveness, neonatal resuscitation, nursing students, newborn, video assisted teaching, program.*

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INTRODUCTION:

Neonatal resuscitation is a super important topic for nursing students. It's all about the techniques and knowledge needed to help newborns who are having trouble breathing or have a weak heartbeat. Training programs make sure students learn the skills to provide the best care in these situations. Staying up-to-date on guidelines and best practices is crucial for nursing students to ensure the safety and well-being of newborns. It's all about being prepared and ready to act when those little ones need it most! In a pilot study on neonatal resuscitation involves conducting a small-scale research project to evaluate the effectiveness of resuscitation techniques specifically for newborn babies. It helped researchers gather initial data, assess the feasibility of the study, and make any necessary adjustments before conducting larger-scale study. The pilot studies are crucial for ensuring the safety and efficacy of neonatal resuscitation practices.

The transition from a fetus to a newborn is the most complex adaptation that occurs in human experience (Hillman et al., 2012). Newborn infants normally start to breathe and usually cry after delivery. The first cry of a newborn carries significant information about the baby's wellbeing and also about his successful adaptation to the extra uterine life (Makoi & Takacs, 2012). The powerful first cry is a sign which shows that the lungs of the baby are fit for breathing (Khan, 2018).

Full term, non-asphyxiated infants cry and initiate ventilation soon after birth even prior to clamping of the umbilical cord (Vali et al., 2015). Most newborns do not require intervention to make the transition from intrauterine to extra-uterine life (Kattwinkel et al., 2010). Approximately, 10% of newborns require some assistance to establish normal respirations at birth. Less than 1% need extensive resuscitative measures such as chest compressions and around 0.06% require epinephrine (Wyllie et al., 2010).

Neonatal resuscitation refers to the medical procedures and techniques used to revive and support newborns who are experiencing difficulty breathing or have a weak heartbeat. It is a critical intervention that aims to ensure the newborn's successful transition to life outside the womb. The process involves assessing the baby's condition, providing oxygen, clearing the airway, and initiating chest compressions if necessary. Additionally, healthcare professionals may use specialized equipment and medications to aid in the resuscitation process. The goal is to establish effective breathing and circulation in the newborn to promote their overall health and well-being.

Failure to breathe well at birth leads to hypoxia if the infant is not rapidly resuscitated. Asphyxia neonatorum is a life-threatening condition because it leads to hypoxia and possible brain damage or death if not managed correctly. Asphyxia neonatorum, also called birth or newborn asphyxia, is defined as a failure to start regular respiration within a minute of birth (Encyclopedia of Children's Health).

Birth asphyxia in the low resource setting is usually defined as a failure to initiate or sustain spontaneous breathing at birth and in some circumstances includes a 1-min Apgar score <7.00 (Lawn et al., 2014). Birth asphyxia accounts for about 23% of the approximately 4 million Neonatal deaths each year worldwide (Black et al., 2010). Perinatal asphyxia (also known as neonatal asphyxia or birth asphyxia) is the medical condition resulting from deprivation of oxygen to a newborn infant that lasts long enough during the birth process to cause physical harm, usually to the brain. It is also the inability to establish and sustain adequate or spontaneous respiration upon delivery of the newborn. It remains a serious condition which causes significant mortality and morbidity. It is an emergency condition and requires adequate and quick resuscitation measures (Wikipedia, 2020).

Perinatal asphyxia is an important clinical condition in the newborn period. It is a leading cause of morbidity and mortality in newborn babies globally, with higher case fatality rates and consequent complications in developing countries due to poor health facilities. Fatalities from perinatal asphyxia remain high in developing countries, and continually assessing its risk factors will help improve outcomes in these settings (Ekwochi et al., 2017).

Neonatal resuscitation is a set of interventions used to assist the airway, breathing and circulation of a newborn following birth. Prior to birth, oxygen and nutrients are provided to the baby by way of the placenta. Once a baby is born, he must rapidly transition to extra uterine life and be able to sustain himself without support from the mother. Sometimes, babies have difficulty making this transition, and it is almost always due to a respiration related issue. Some of these babies need a small amount of help and will not require much intervention. Others will be in so much respiratory distress that it begins to affect their cardiovascular system and they will need a full resuscitation. In most cases, fixing the respiratory issue will also resolve the cardiovascular issue when dealing with neonates (Neonatal Resuscitation: Definition, Steps & Techniques, 2017).

MATERIALS AND METHODS:

Research Design: A non-randomized quasi-experimental design (One group pretest-posttest) have been used in this study.

Research setting: Nursing colleges in Hyderabad, India.

Study population: The population for the present study will be third year nursing students enrolled in the bachelor's degree program.

Sample: The present study included the nursing students studying Pediatric nursing and/or Obstetrical nursing as a main subject of their bachelor's degree program in selected nursing colleges.
Sampling Technique: Sampling is a process of selecting a portion of the population to represent entire population. Purposive sampling technique will be used for selecting the sample.
Sample size: 300 nursing students.

DESCRIPTION OF THE TOOL:

The tool will be prepared by the investigator and will get it validated by experts. The modifications and suggestions of experts will be incorporated in final preparation of the tool. The tool consists of 3 parts:

Part:1- Demographic Variables: Demographic variables include Age, Gender, Religion, Name of the college, Class of studying, source of information.

Part: II- Knowledge questionnaire: In this study specific questions will be developed to measure the knowledge and practices regarding multiple aspects of Neonatal Resuscitation.

Part III: Checklist will be prepared by the investigator regarding Neonatal Resuscitation

ANALYSIS AND RESULTS:

Levels of knowledge	**Pre intervention**	
	Frequency	**Percentage**
Inadequate knowledge	20	67.0
Moderately adequate knowledge	6	20.0
Adequate knowledge	4	13.0
Total	300	100

The above table shows that the frequency and percentage distribution of pre intervention levels of knowledge and practice scores among nursing students 67.0% had inadequate knowledge, 20% had moderately adequate knowledge and 13.0% had adequate knowledge.

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